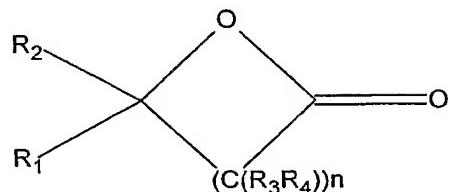


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C L A I M S

1. A process for the preparation of an alkyl alkenoate, wherein a lactone of the general molecular formula



wherein n is 1, 2 or 3, R₁ is a C₁-C₄ alkyl group, and R₂, R₃ and R₄ are, independently, a H atom or a C₁-C₄ alkyl group,

5 is reacted with a C₁-C₄ alkyl alcohol in a liquid phase in the presence of a strong acid catalyst at transesterification conditions to form the alkyl alkenoate, wherein alkyl alkenoate and alcohol are continuously removed from the liquid phase by distillation.

- 10 2. A process according to claim 1, wherein R₁ is an ethyl or a methyl group, preferably a methyl group.
3. A process according to claim 1 or 2, wherein R₂ is a hydrogen atom.
- 15 4. A process according to any one of the preceding claims, wherein both R₃ and R₄ are a hydrogen atom.
5. A process according to any one of the preceding claims, wherein n is 2.
- 20 6. A process according to any one of the preceding claims, wherein the lactone is gamma valerolactone and the alkyl alkenoate is alkyl pentenoate.

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7. A process according to any one of the preceding claims, wherein the lactone-to-alcohol molar ratio in the liquid phase is at least 3, preferably at least 5, more preferably at least 10.

5 8. A process according to any one of the preceding claims, wherein the reaction is carried out at a temperature in the range of from 100 to 300 °C, preferably of from 150 to 250 °C.

10 9. A process according to any one of the preceding claims, wherein the pressure in the reaction zone is in the range of from 0.01 to 10 bar (absolute), preferably of from 0.1 to 5 bar (absolute), more preferably ambient pressure.

15 10. A process according to any one of the preceding claims, wherein the alkyl alcohol is methanol or ethanol, preferably methanol.

11. A process according to any one of the preceding claims, wherein the catalyst is a strong liquid acid, preferably sulphuric acid or p-toluene sulphonic acid.

20 12. A process according to any one of claims 1 to 9, wherein the catalyst is a strongly acidic solid, preferably an ion-exchange resin or acidic ZSM-5 or beta zeolite.